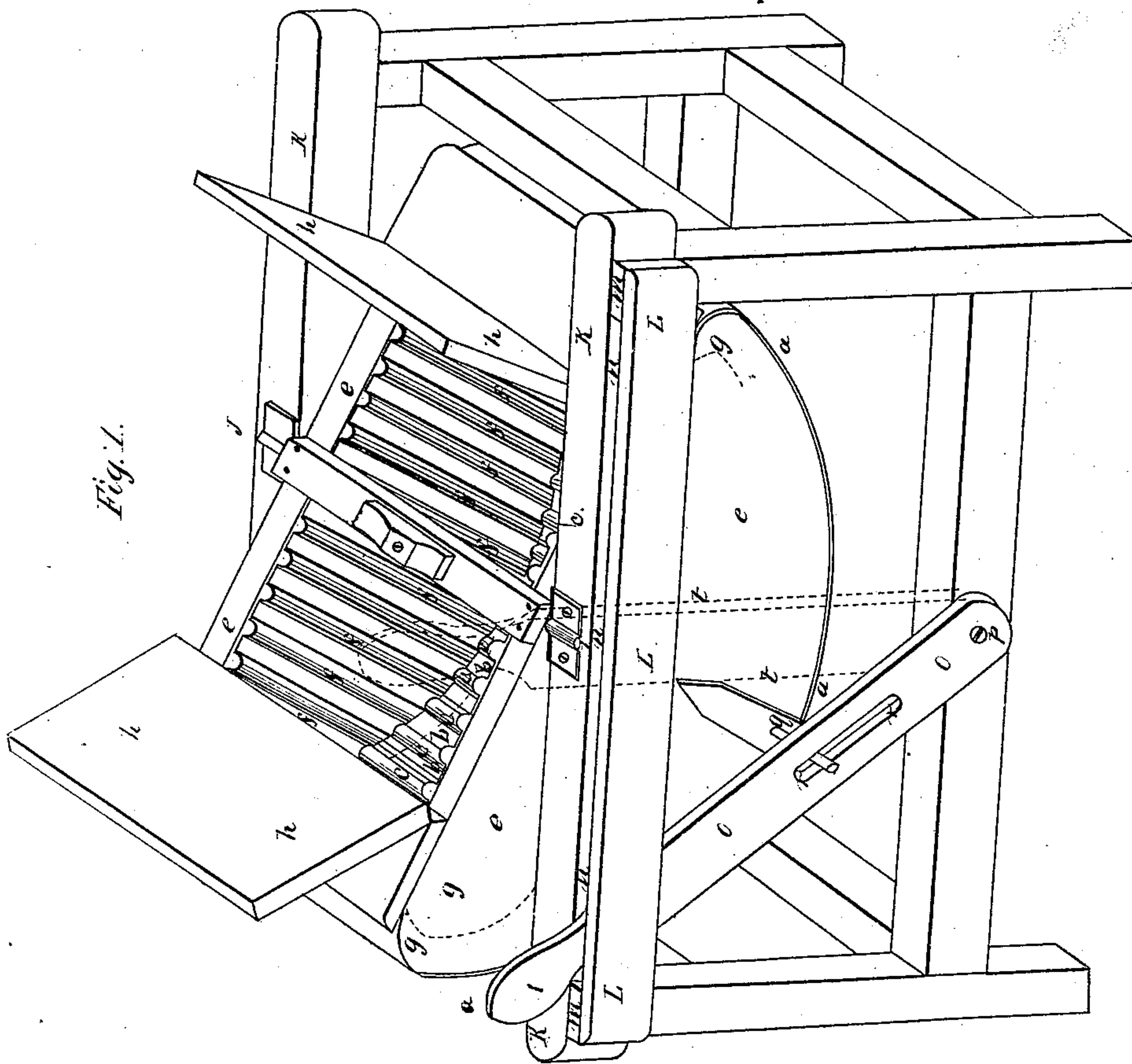


2 Sheets, Sheet 1

*R H Harrison,  
Washing Machine.*

N<sup>o</sup> 20,791

*Patented July 6, 1858.*

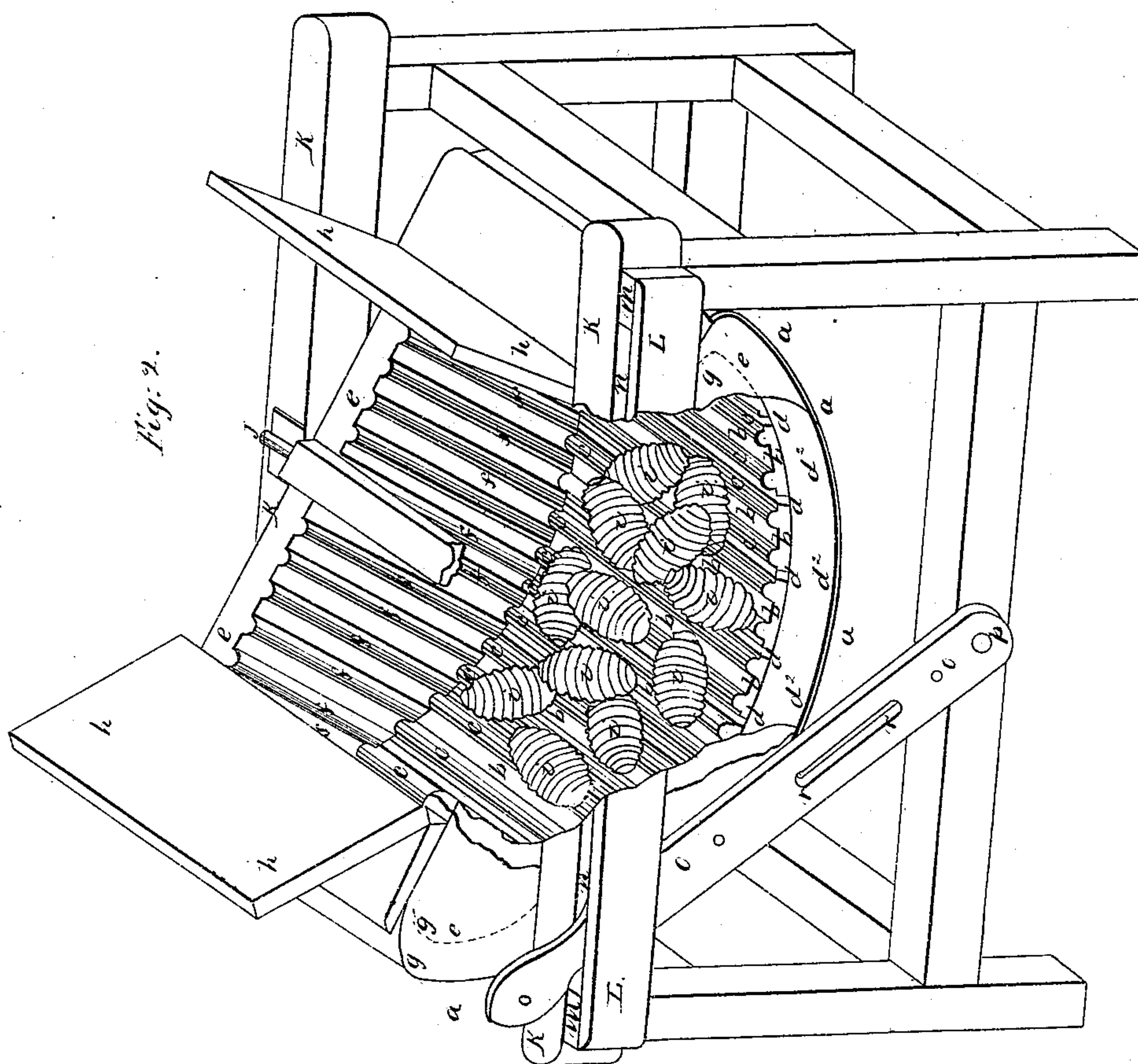


2 Sheets Sheet 2

*R. H. Harrison,  
Washing Machine.*

*N<sup>o</sup> 20,791.*

*Patented July 6, 1858.*





# UNITED STATES PATENT OFFICE.

R. H. HARRISON, OF LAUREL, MARYLAND.

## WASHING-MACHINE.

Specification of Letters Patent No. 20,791, dated July 6, 1858.

*To all whom it may concern:*

Be it known that I, ROBERT H. HARRISON, of Laurel, in the county of Prince Georges and State of Maryland, have invented and made certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a perspective view of the machine. Fig. 2, is a perspective view of the machine, with a fragment of the side of the tub part taken out, exposing the slat suspension, bottom and the beaded or ridged balls.

The nature of my improvements consists in constructing a washing machine, wherein the clothes to be washed are rubbed between the surfaces of an open, grating like, secondary, bottom, and the surfaces of beaded, ridged, ribbed, or roughened floating rolling elastic or wooden balls, through which devices, any particular portion, or part of a single garment can be washed thoroughly. These balls, may be beaded, transversely, longitudinally, obliquely or otherwise. The better however to give a perfect description of the nature and principle pertaining to my improvements and the operation thereof, I will describe the same more fully.

At *a, a, a, a*, is an outside, surrounding bottom of any suitable wooden or metallic material, of an oval, or semicylindrical form; and at *b, b, b, b*, is an open, grating like slatted, ribbed, or fluted, secondary bottom, formed of strips or slats, having ridges, or beaded formations *c, c, c, c, c, c, c*. These strips or slats, *b, c, c—b, c, c—b, c, c—b, c, c*, are from two to three inches wide, and arranged within the surrounding bottom, transversely across the machine, leaving spaces or openings between, from half an inch to one inch apart as at *d, d, d*, and from one to two inches above the surrounding bottom, leaving a space between around as at *d<sup>2</sup>—d<sup>2</sup>—d<sup>2</sup>*, Fig. 2. The lateral or side surroundings *e, e, e, e* are beaded, fluted or grooved vertically, (or obliquely) as at *f, f, f, f, f, f*. The ends of the tub or receptacle part *a, a, a, a—e, e, e*, terminate in concave curves *g, g, g*, instead of angles or straight terminations. This receptacle or tub part *a, a, e, e*, may vary in size and dimensions, according to requirements, and may be open

on top, or have hinged doors *h, h, h, h*. Within this peculiarly formed tub, or receptacle, are used one or more hundred beaded ribbed, ridged, or roughened, round, or oval formed elastic or soft wood balls *i, i, i, i, i, i, i, i, i, i*.

The wash tub or receptacle part *a, a, a*, is swung or suspended by its center, from the top edge of the sides, by journals or axles *J, J* resting in boxes or journal places, formed in, or attached to the top rails of the framing, or stand part *k, k, k, k* of the machine. This framing or stand part, may be made of any substantial form to suit convenience; and to the side, parallel with the longitudinal top rail *k, k*, is a strip rail *L, L, L*, attached to blocks *m, m*, of suitable thickness, so as to throw the strip rail *L, L, L*, one or more inches off from the rail *k, k*, leaving a longitudinal space *n, n, n*, in which is to pass upward, a hand rocking lever *o, o, o, o*, connected at its lower extremity to the lower rail of the framing or stand by a joint pin, or fulcrum bolt *p*. This rocking lever has a slotted formation or oblong opening of sufficient length and size, in which slides or moves a rod *q, q*, of suitable size. This rod being inserted horizontally into the side of the tub, at the center of the length of the circumference, in a vertical line with the axis or journal *J, J*.

The operation of my machine is as follows: A sufficient quantity of water is used with soap deposited in it, the clothes are thrown in, and the operator of the machine, stands alongside thereof, and taking hold of the handle, or upper part of the rocking lever *o, o, o*, pushes it back and forth, giving the upper end or handle, eight or ten inches sweep; and as the rod *q, q*, plays in the slot *r, r*, the tub or receptacle part is caused thereby to rock or oscillate more or less according to the movement of the rocking lever, and thereby the water is agitated, the balls and clothes are set in motion, and the washing or rubbing action is brought about; the balls mingling up with the clothes, while the beaded slats, and beaded balls perform the functions of rubbing, as the clothes are rocked and tossed back and forth; and the water agitated by the motion of the machine, strikes in between the spaces *d, d, d, d* of the grate like, secondary bottom, producing thereby the suds, which percolates through and through the clothes, as they move to and fro; thus thoroughly detaching



the dirt, causing the sedimentary matter to descend, or filter downward between the slats and deposit on the surrounding bottom *a, a, a, a, a*, which can be provided with  
 5 a spigot inserted in the bottom or side of the machine, through which the filthy water or suds can be drawn off, leaving the clothes and balls resting on the slats *b, c, c—b, c, c—b, c, c*, when fresh clean water can be ap-  
 10 plied, and thus the clothes are effectually cleansed, ready for wringing and drying, in a very brief space of time, and with about one third the usual labor.

When the wristbands, or any particular  
 15 portion of a garment requires special washing, the garment is arranged pendantly at *s*, from the edge top, connecting with the lid or cover, so that the dirty portion can rest on the ribs or beads *b, c, c—b, c, c—*  
 20 while the balls *i, i, i, i, i*, will in passing or rolling back and forth, press on and rub against and over the desired part of the garment; and in this peculiar feature of operating the machine, a decided improved me-  
 25 chanical principle of washing is developed.

It will be perceived, that the rod *q, q*, working in the slot *r, r*, operates also as an alternating moving fulcrum, and conse-

quently the leverage varies in power, and also alternately diminishes and increases as  
 30 the rod *q, q* changes its position in the slot.

The vertical rows of dots *t, t, t, t*, show the position of the rocking lever, when the tub or receptacle part of the machine is at the counterpoise point. 35

The Figs. 1, and 2, represent the machine tilted from one side to the other, or its position when being rocked to and fro.

Having described the nature, construction and operation of my improvements, 40 what I claim as new, and desire to have secured by Letters Patent of the United States; is—

The construction of a washing machine having a concave bottom *a, a, a, a, a*, with a 45 secondary, grating like or fluted, bottom *b, c, c—b, c, c—b, c, c*; the slotted rocking lever *o, o, o—r, r*, and the corrugated balls *i, i, i, i*, or other equivalents, the whole constructed, arranged, and operated substan- 50 tially in the manner as herein set forth and described.

R. H. HARRISON [L. s.]

Witnesses:

ED. I. GALLAHER,  
 JOHN S. GALLAHER.